2010-2020

SUSTAINABLE CITY ACTION PLAN

10 YEAR REVIEW

An Overview of Accomplishments

LONG BEACH SUSTAINABILITY

CITY OF LONG BEACH

The City of Long Beach strives to be a leader in sustainability - environmental, economic, and social. The Sustainable City Action Plan (SCAP) was adopted by City Council in 2010 and guided the City of Long Beach's initiatives around environmental sustainability for 10 years. This plan was originally developed by staff to identify some of the most pressing issues, set ambitious goals for new and existing programs and policies, and help track progress towards sustainability achievements. Over the 10 years this plan was active there were many impressive achievements which are detailed in this report.

You will notice some of the goals from the SCAP are missing from this report. This is due to unavailable data, discontinuance of programs, or a similar reason. Where there is a similar accomplishment, program, or initiative the City can report on, we have matched SCAP goals with their best fit, even if it isn't an exact match to what we set out to accomplish 10 years ago.
One of the main lessons from creating this report is how quickly goals and priorities can change in sustainability. New technology becomes available, or prices fall for existing technology like solar making it more widely accessible. State and federal policy also shapes the City's initiatives and can make funding available or set requirements which shift priorities.

In this changing landscape it is important to reflect and reevaluate much more often than once per decade. Therefore, the next Sustainability Strategic Plan will have a five-year timeframe to push us to report on and reassess our priorities and goals more quickly and ensure we are responding to the needs of our local community as well as the national and global fight against climate change.

This report is broken into sections that mirror the SCAP. Each section begins with a brief overview of accomplishments and learnings that we will take forward into the new Sustainability Strategic Plan. Each section then lists the SCAP goals with corresponding data showing what has been accomplished between 2010 and 2020.

For any questions about this report, please reach out to us at Sustainability@longbeach.gov. We also hope you will help us develop the new Sustainability Strategic Plan by providing your input or feedback. You can find updates on the new plan at www.longbeach.gov/sustainabilitystrategicplan.

Published December 3, 2021

BUILDINGS & NEIGHBORHOODS

Buildings have a large impact on our city's use of resources and our GHG emissions as they determine how efficiently we use resources like electricity, water, and gas that is brought into our homes and workplaces. LEED (Leadership in Energy and Environmental Design) certification from the USGBC (U.S. Green Building Council) provides a standard for efficiency that all buildings can work to meet to conserve resources. The City has a requirement in place since 2003 that all new City facilities must be built to LEED Silver standard or higher. Most new buildings are built to LEED standards now as it has become the new standard practice among developers and the efficiency measures implemented will save owners and tenants money over the life of the building. Long Beach also has its own chapter of USGBC which encourages LEED professionals to engage in the issues surrounding building efficiency and sustainability.

Also prominent in our neighborhoods are the trees which shade our streets, sidewalks and buildings. The City came close to meeting its goal to plant 10,000 trees between 2010 and 2020. There is still a lot of work to do to grow Long Beach's urban forest; the street tree inventory conducted in 2018 identified 45,000 vacant tree sites. We also know that many trees have been removed due to old age or disease, creating more vacancies in our parkways, and these numbers don't include opportunities to plant in parks or along medians. The Office of Sustainability hopes to focus tree planting where it is most needed in areas that will be most impacted by urban heat, urban flooding, and air pollution. Additional green infrastructure such as shade structures, permeable pavements, and nature-based systems are also being explored to address these issues.

Goal: 100% of major city facilities are LEED certified (or equivalent) by 2020

Accomplishments

9 City Projects:
- Mark Twain/MacArthur Park Branch Library
- Long Beach Fire Station No. 12 & DRB
- Gas and Oil Engineering Building
- Long Beach Airport Terminal Improvements
- Orizaba Park Community Building
- Michelle Obama Library (formerly North Branch)
- Long Beach Civic Center - Main Library
- Long Beach Civic Center - City Hall
- Houghton Park Community Center

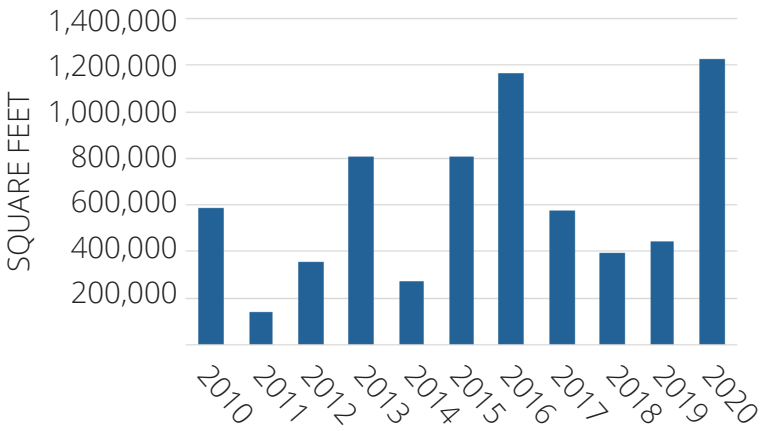
And the Port Administration Building, as well as **9** additional Port of Long Beach Projects.

Goal: At least 5 million square feet of privately developed LEED certified (or equivalent) green buildings by 2020

Accomplishments

As of 2020, there are over 11.5 million square feet across 95 certified projects. This number includes City, Port, and State projects. As of 2020, there are over 6.7 million sq ft across 71 privately developed projects.

Privately Developed LEED Certified Projects



Goal: Double the number of LEED accredited professionals (or equivalent) in the City and community by 2012

Accomplishments

221 people within the Long Beach community have earned a LEED credential

**The number of LEED accredited professionals in the year 2010 is not known.*

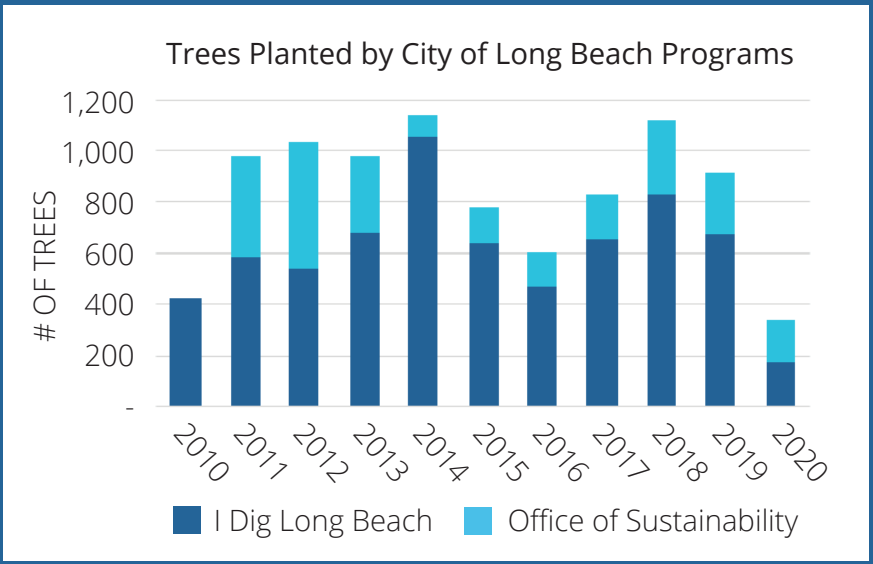
Goal: Plant at least 10,000 trees in Long Beach by 2020

Accomplishments

Neighborhood Services has planted **6,726** trees through *I Dig Long Beach.*

Office of Sustainability programs have planted **2,296** street trees and fruit trees.

Total: **9,022 trees planted**



Source: City of Long Beach

Goal: Create at least 6 new community gardens by 2012

Accomplishments

6 new community gardens and **5** teaching/therapy gardens were opened between 2010 and 2020.

Community Gardens

- South 40 Community Garden
- Mary Molina Garden
- 7th & Chestnut Garden
- Orizaba Park Garden
- Crown Victory Garden
- Peace Garden in MLK Park

Teaching/Therapy Gardens

- The Children's Gateway Garden in Cesar Chavez Park
- The Michelle Obama Library Garden
- Adventures to Dreams Drake Park
- The Maye Center
- Farm Lot 59

ENERGY & CLIMATE

Over the last 10 years we see that community energy use and GHG emissions from City opera-tions have both trended downwards. We are going in the right direction, but we will need to speed things up to meet the City's Climate Action and Adaptation goals. The state's renewable portfolio standard for electricity providers is steadily increas-ing the amount of renewable energy on the grid which will continue to bring down GHG emissions from electricity use. The City is also considering Community Choice Energy (CCE, also known as CCA), to increase renewable energy even faster and make local investments in energy efficiency and energy infrastructure.

Solar on City facilities fell short of our goal for 2020, but power purchase agreements for multiple City facilities are finally coming to fruition and will install 6MW in 2021. The community adoption of solar has far outstripped the goal set in the SCAP 10 years ago. Lower prices and incentives have made it much more accessible, but there is still work to do to make solar accessible to all in our community. GRID Alternatives is a local partner that works to make renewable energy technology and job train-ing accessible to underserved communities, and we plan to continue working with them in the future.

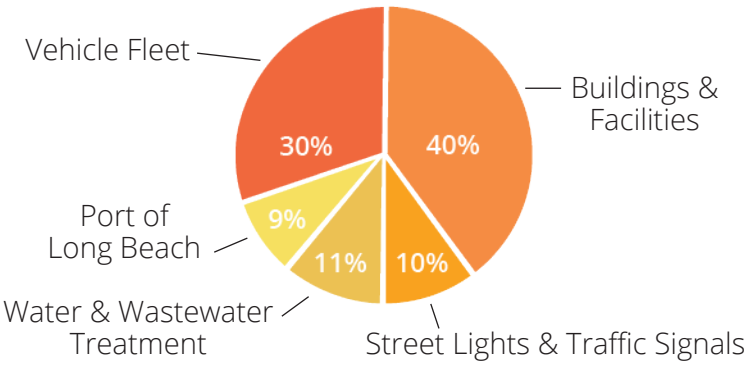
Goal: Reduce greenhouse gas emissions from City facilities and operations by 15% by 2020

Accomplishments

There was a **16%** reduction in greenhouse gas emissions from municipal operations between 2008 and 2015* This decrease includes a 10% decrease in Scope 1 (direct) emissions and a 20% decrease in Scope 2 (indirect) emissions.

**To ensure a like-for-like comparison between GHG inventories, reduction analysis did not include the Convention Center or process emissions.*

2015 City of Long Beach
Municipal C)2e Emissions by Sector



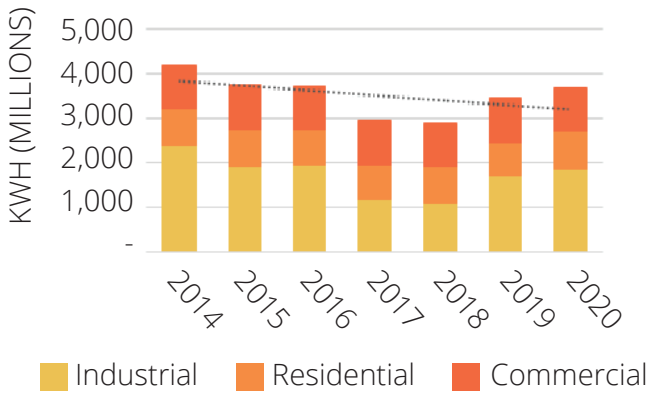
Source: City of Long Beach

Goal: Reduce community electricity use by 15% by 2020

Accomplishments

There was a **12.3%** reduction in total community electricity use between 2014 and 2020.

Long Beach Community Electricity Use



Source: Southern California Edison Quarterly Customer Data Reports

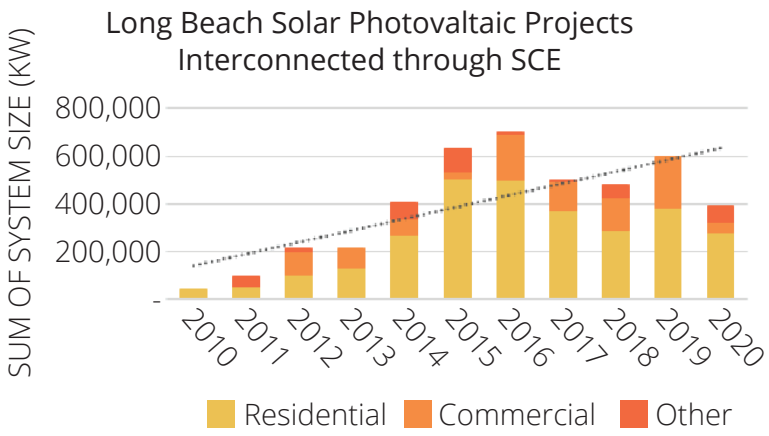
Goal: Reduce community natural gas use by 10% by 2020

Accomplishments

Natural gas useage is up **2%** since 2010.

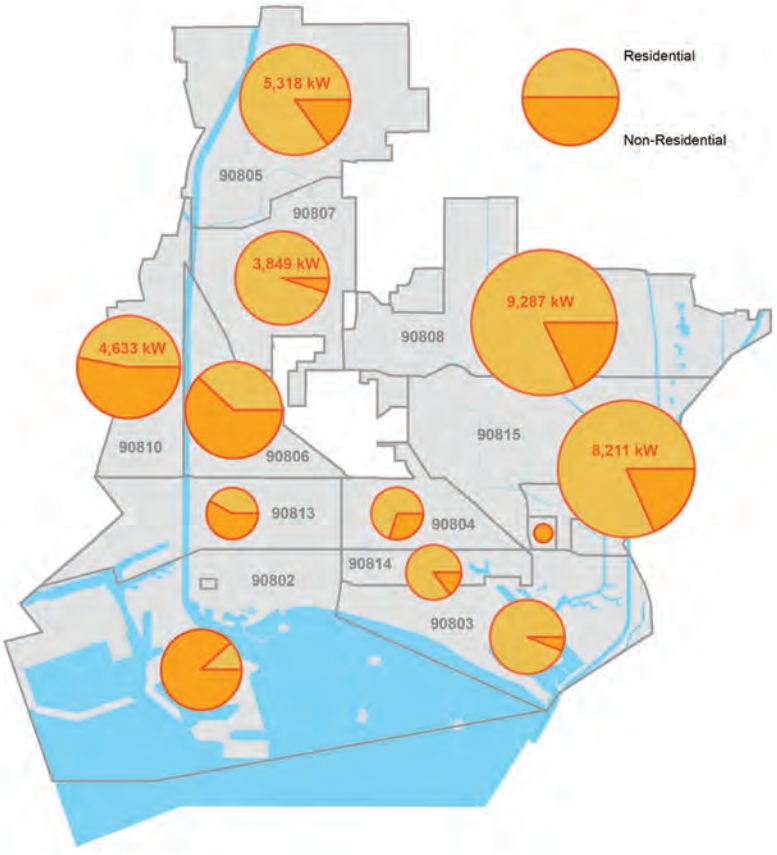
We see an increase in natural gas usage due to its increasing use as a lower-emission transition fuel as compared to conventional fuel types. Long Beach Transit and Long Beach Fleet heavy duty vehicles have largely been converted to run on natural gas. In addition four natural gas fuel cells were installed in Long Beach between 2010 and 2019.

Goal: Facilitate the development of at least 8 Megawatts of solar energy within the community (private rooftops) by 2020



Accomplishments

44 MW of solar energy are currently installed in Long Beach.



Each pie chart on this map represents the amount of solar in a ZIP code. The largest pie charts show where the most solar is present and are labeled with the total kW production. The pie charts also display the breakdown between residential and industrial solar uses in that ZIP code. We have seen a sharp increase in solar over the last decade, but there are clearly areas where solar is less prevalent or where it is mainly industrial, and rooftop solar hasn't yet been widely adopted.

Chart and map source: California Distributed Generation Statistics Inter-connected Project Sites Data Set

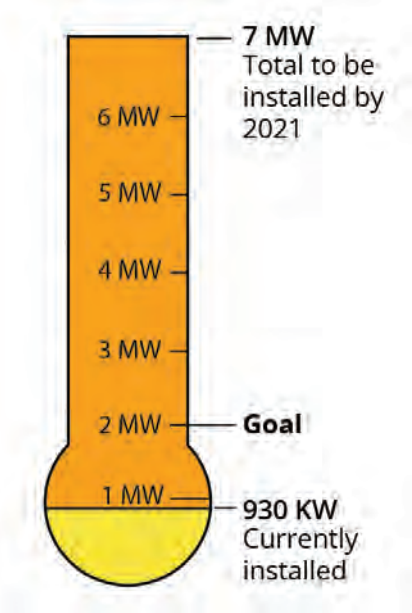
Goal: Facilitate the development of at least 2 Megawatts of solar energy on city facilities by 2020

Accomplishments

Solar panels were installed at the new Civic Center totaling **930 KW** with an upcoming installation for an additional 46.9 KW.

The City entered a Power Purchase Agreement (PPA) for 3 MW of solar on the Convention Center. A separate PPA for 10 City facilities totaling **6 MW** of solar is to be installed by Q3 2021.

Long Beach City Solar System Facilities	
Property Name	**Approximate System Size (KW-DC)**
Airport Garage (Lot A & B)	2,375.6
Aquarium Parking Structure	1,062.4
City Place Lot A	146.4
City Place Lot B	177.6
City Place Lot C	91.2
East Division Police Substation	158.4
Main Health Dept Building	460.8
Long Beach Gas & Oil Headquarters	550.8
Pike Parking Structure	421.8
Public Works Yard	633.6
Total	6,069.6



GREEN ECONOMY & LIFESTYLE

The Office of Sustainability aims to raise awareness of environmental issues and educate residents about all of the ways they can engage in civic and personal actions to help Long Beach become more sustainable and resilient. The Office hired a Com-munications Specialist at the end of 2016, so the data below is from the digital communications for 2017-2020. The Office's digital reach has expanded significantly during this time, and staff were able to shift in-person events such as workshops to a digital format during 2020.

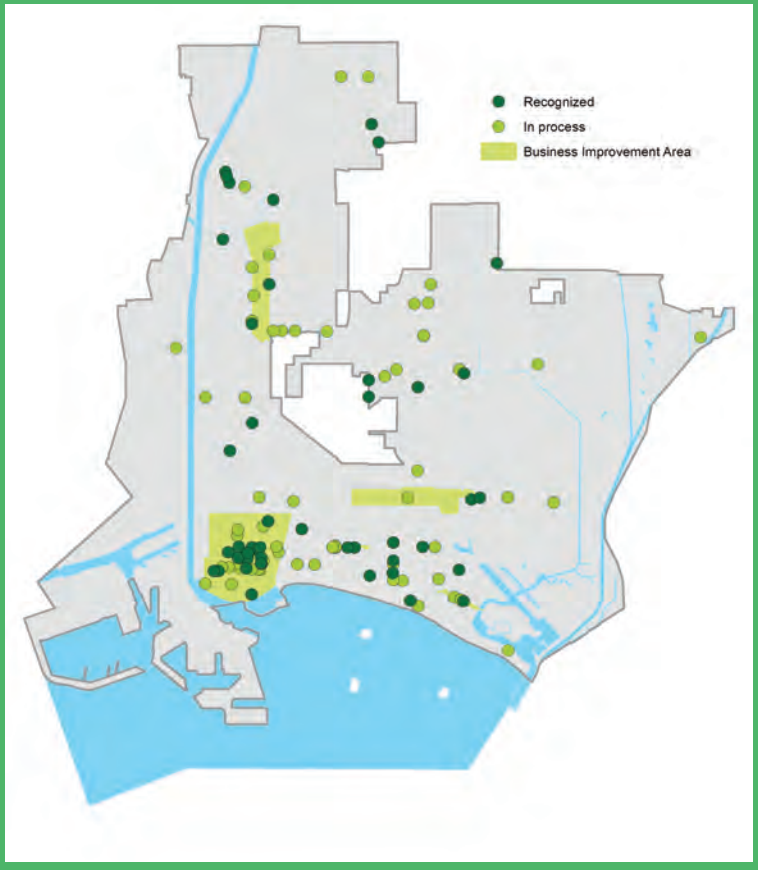
The Green Business Program re-launched in 2018 under the California Green Business Network (CAGBN) to provide a statewide standard for certifi-cation to our Long Beach business community. The program aims to encourage best practices, recog-nize and promote environmental leaders, and provide education and technical assistance to businesses to go green. By the end of 2020 the program had enrolled 169 businesses and certified 51 with 3 businesses recognized at the efficiency level. The program has also been able to offer $500 rebates to businesses to offset any costs associated with their certification thanks to state funding through CAGBN in the 2019-2020 and 2020-2021 funding cycles.

Goal: Enroll 100 green businesses in the Long Beach Green Business Certification Program by 2012

Accomplishments

The new Green Business Program relaunched in 2018 and enrolled **169** businesses by the end of 2020.

52 businesses have been certified, and **3** have been recognized at the Efficiency level for taking significant action to reduce environmental impact.



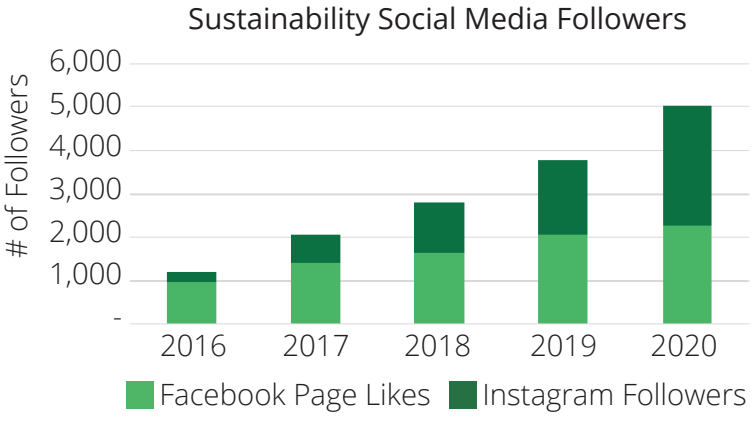
This map shows the distribution of businesses that are either recognized or working on certification through our Green Business Program. We strive to make this program accessible to all Long Beach businesses and provide resources to help them go green.

Goal: Annual increase in participation in citywide green events

Accomplishments

Office of Sustainability Newsletter subscribers have increased by **319%** between 2017 and 2020. There are over **4,700** people that received our 2020 fall newsletter.

5,000 followers across @LBSustainability Instagram and Facebook accounts.



Source: City of Long Beach, Office of Sustainability

TRANSPORTATION

Long Beach's Fleet Services Bureau has won multiple awards for the sustainability and efficiency measures it has implemented to reduce GHGs and other emissions from City vehicles. Most recently, the City's fleet placed 3rd in the 2020 Leading Fleets competition from Government Fleet magazine and the American Public Works Associa-tion. For years Fleet Services has worked to stay at the forefront of emerging technology as it replaces aging vehicles in the City's fleet with the latest technology. In 2017 the City opened a new com-pressed natural gas (CNG) filling station which now provides mostly renewable natural gas to the City's heavy duty vehicles. In 2018 the City adopted a policy to replace all vehicles with fully battery electric vehicles (BEV) whenever possible which has lead to the acquisition of over 70 BEVs as of 2020.

The City has also invested extensively in supporting active transportation among residents and City staff. 168 miles of bike routes have been installed with the Bicycle Master Plan calling for 300 total miles of bikeways in Long Beach by 2040. Public Works has received grant funding from the state and county to implement a dozen new bicycle and pedestrian infrastructure projects over the next decade with additional local return funding set aside for smaller scale safety improvement projects and programs. Programs have also been imple-mented for City staff, which include free bus passes, $30 per month alternative commute incentive, and a bike storage and locker room facility at the new City Hall. We also see ownership of electric vehicles increasing among Long Beach residents as they become more affordable and charging infrastruc-ture becomes more accessible.

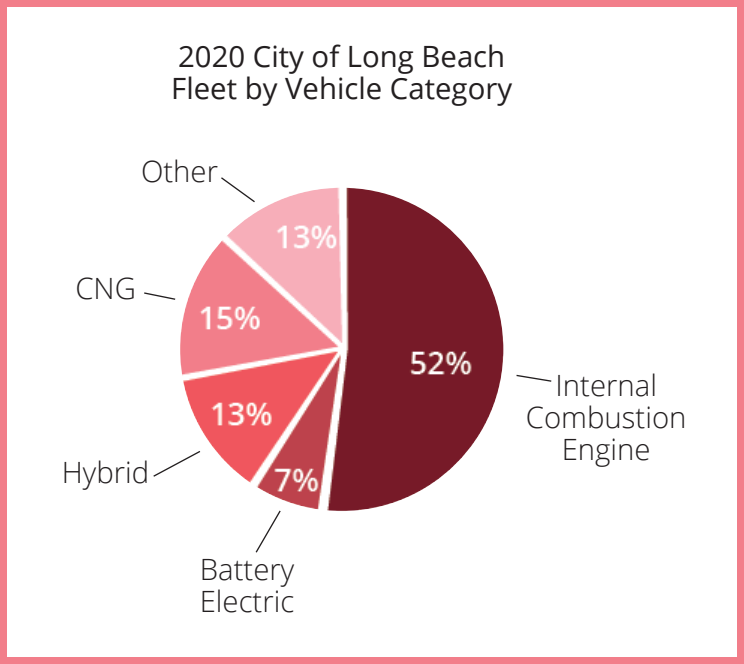
Goal: 100% of the City fleet is alternative fuel and/or low emission by 2020

Accomplishments

Alternative Fuel vehicles in City's Motorized Fleet in 2020: **47.6%**

Fleet Electric Vehicle count in 2020: **66** EVs

Fleet Electric Vehicle Fleet Charger count in 2020: **80** EV Ports

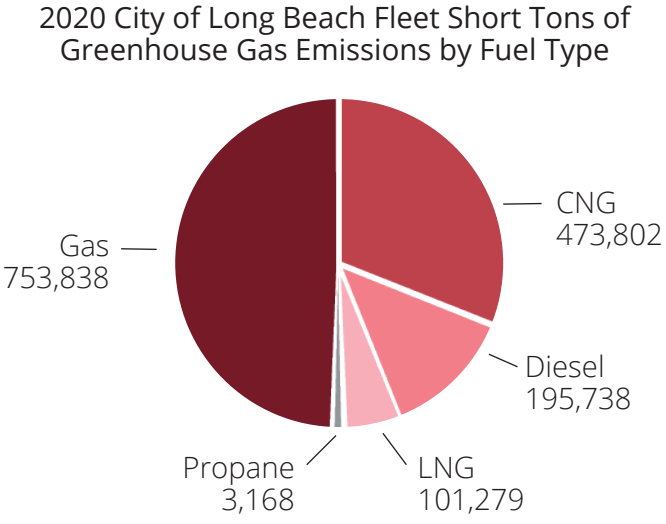


Source: City of Long Beach, Fleet Services

Goal: Reduce vehicle emissions by 30% by 2020

Accomplishments

There was a **49%** reduction in GHG emissions in City Fleet between 2010 and 2020.

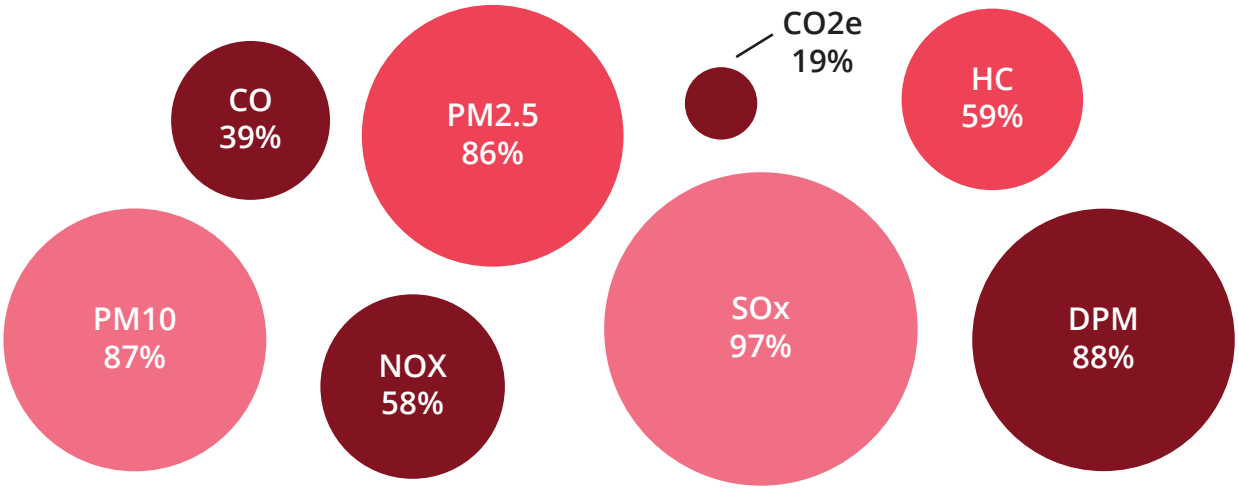


Source: City of Long Beach, Fleet Services

Goal: Reduce future port-related emissions by 47% reduction in DPM, 45% reduction in NOx, and 52% reduction in SOx from OGV, CHE & HDV source categories by 2011

Accomplishments

Between 2005 and 2019, the Port of Long Beach has achieved these reductions:



Source: Port of Long Beach 2019 Air Emissions Inventory

Goal: Create a system of at least 200 miles of interconnected bike routes (Class 1-3) by 2020

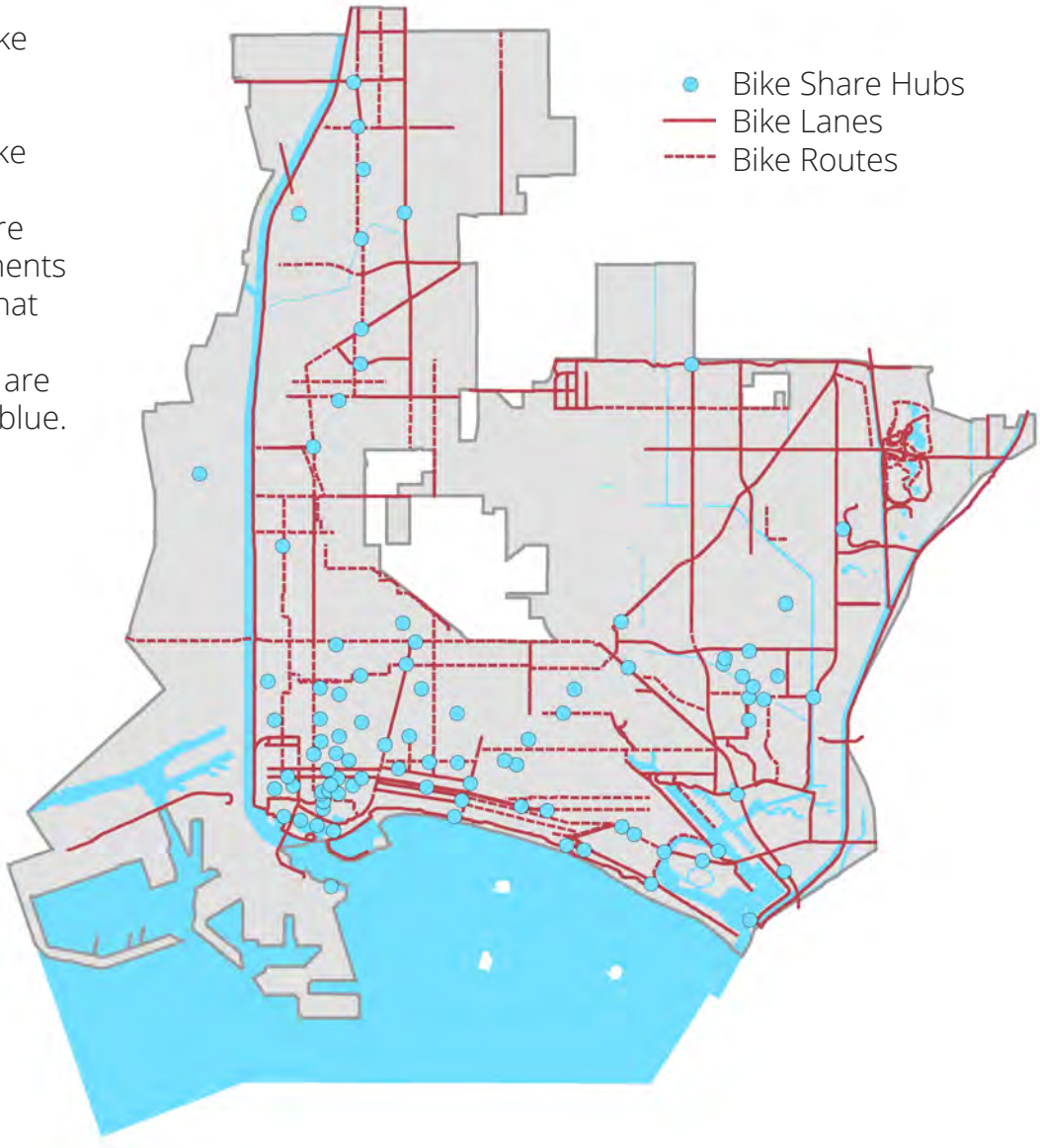
Accomplishments

Total bicycle facility mileage is currently **168 miles**, including 13.6 miles of protected bike lanes (Class IV).

The 2017 Bicycle Master Plan was adopted by Council with a focus on creating a connected bike network for people of all ages and abilities.

The 2020 Safe Streets Long Beach Action Plan was adopted by Council to eliminate serious injury collisions and fatalities on Long Beach roadways.

This map shows the bike infrastructure in Long Beach including where there is a dedicated bike lane (protected or unprotected) and where there are street treatments to create bike routes that are more friendly for cyclists. Also displayed are the BikeShare hubs in blue.



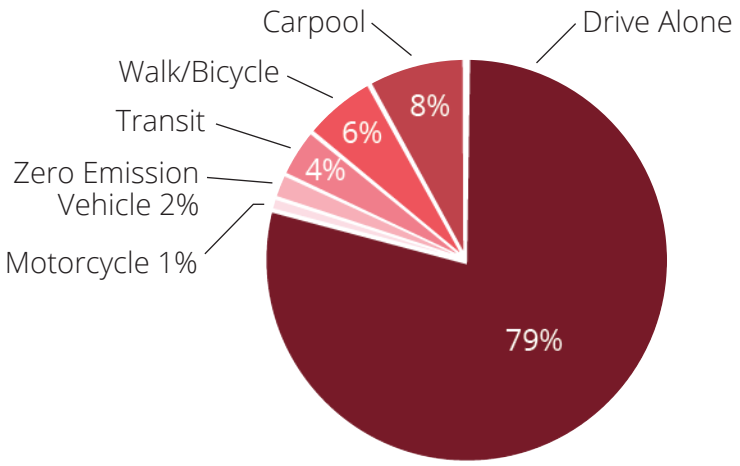
Goal: Increase city employee average vehicle ridership to 1.5 by 2012

Accomplishments

The City's Employee Commute Reduction Plan was introduced for City employees in 2017 creating a $30/month incentive for alternative transportation.

21% of City Employees arrived at work by Zero Emission Vehicle, walking, biking, transit, or carpool.

2019 City of Long Beach Employee Commute by Category



Source: 2019 City of Long Beach Commute Survey

Goal: Increase bike ridership from 1% to 10% by 2016

Accomplishments

There are 171 City Hall employees who are members of the bike storage room.

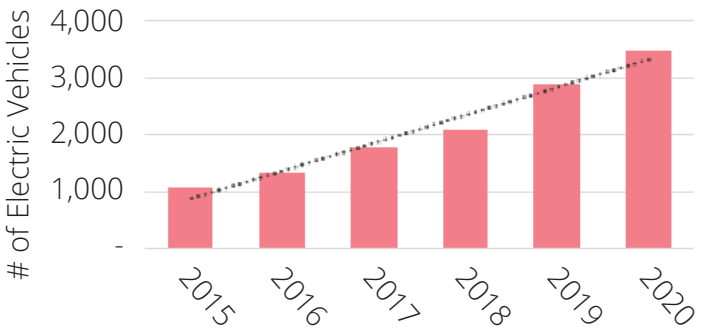
Bike share was launched in 2016 and shared e-scooters were launched in 2018.

City employees get a $5 per month discount on bike share.

Additional accomplishments:

- EV ownership has increased in Long Beach.
- An EV Charging Infrastructure Ordinance was passed in 2016, requiring more EV-ready parking spaces in new development.
- 180 EV chargers have been installed by the City of Long Beach.

Number of Electric Vehicles Registered in Long Beach



Source: California Department of Motor Vehicles Bi-Annual Motive Power Reports

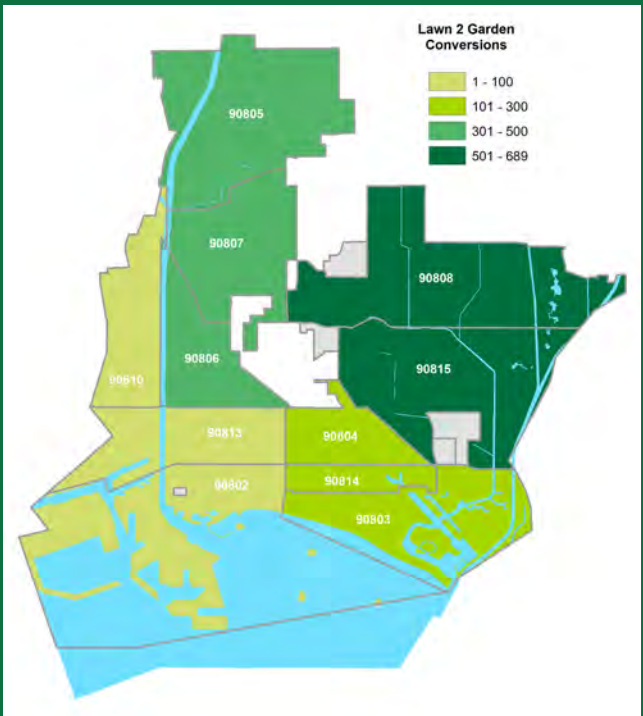
URBAN NATURE

Open space provides many benefits to Long Beach residents improving health outcomes and overall well-being, and providing spaces for community gathering and recreation. Since 2000 Long Beach has added 221 acres of park space mostly in under-served areas. Currently Long Beach has 6.64 acres of park space per 1,000 residents, increased from 5.66 in 2001, and 84% of Long Beach residents live within a 10 minute walk of a park. The Long Beach Parks, Recreation & Marine Department (Parks) recognizes that "parks and open space are critical social determinants of health," and "certain areas may be in greater need of additional park and open space resources than others to offset or mitigate the City's environmental issues" (Parks memo, 2021). Tools like CalEnviroscreen and Com-plete Park Indicators are being used by Parks to evaluate park equity needs in Long Beach neigh-borhoods.

Other urban nature goals include transforming lawns to native gardens. Through the Water Depart-ment's Lawn to Garden program, 3,600 yards with 3.6 million square feet of space were transformed from turf to native or drought tolerant landscaping. The Water Department also launched two new programs in 2020 to make these transformations more accessible to low income households, the Native Plant Parkway Program and the Direct Install Garden Pilot Program.

Willow Springs Park also added 12.5 acres to Long Beach's native landscape with the new restoration area that opened in 2017. This new park space provides additional park acreage in a park poor area of the city, introduces native habitat to support native fauna, and provides opportunities for educational programs and green jobs training.

Goal: Convert 1,200 front yards to native or edible landscape by 2016



Accomplishments

3,600 landscapes were transformed across the city, and **3.6 million** square feet of turf was removed.

50 parkways were converted across the city; **19,000** square feet of parkway grass was replaced by native plants.

3 landscapes were transformed in disadvantaged communities in North Long Beach through the DIG program.

This map shows the number of lawns converted to gardens in each ZIP Code.

Source: Long Beach Water Department

Goal: Establish one or more Nature Centers along the L.A. River by 2016

Accomplishments

DeForest Park wetlands were restored in 2018 with a nature center facility planned.

Goal: Train 500 Habitat Stewards

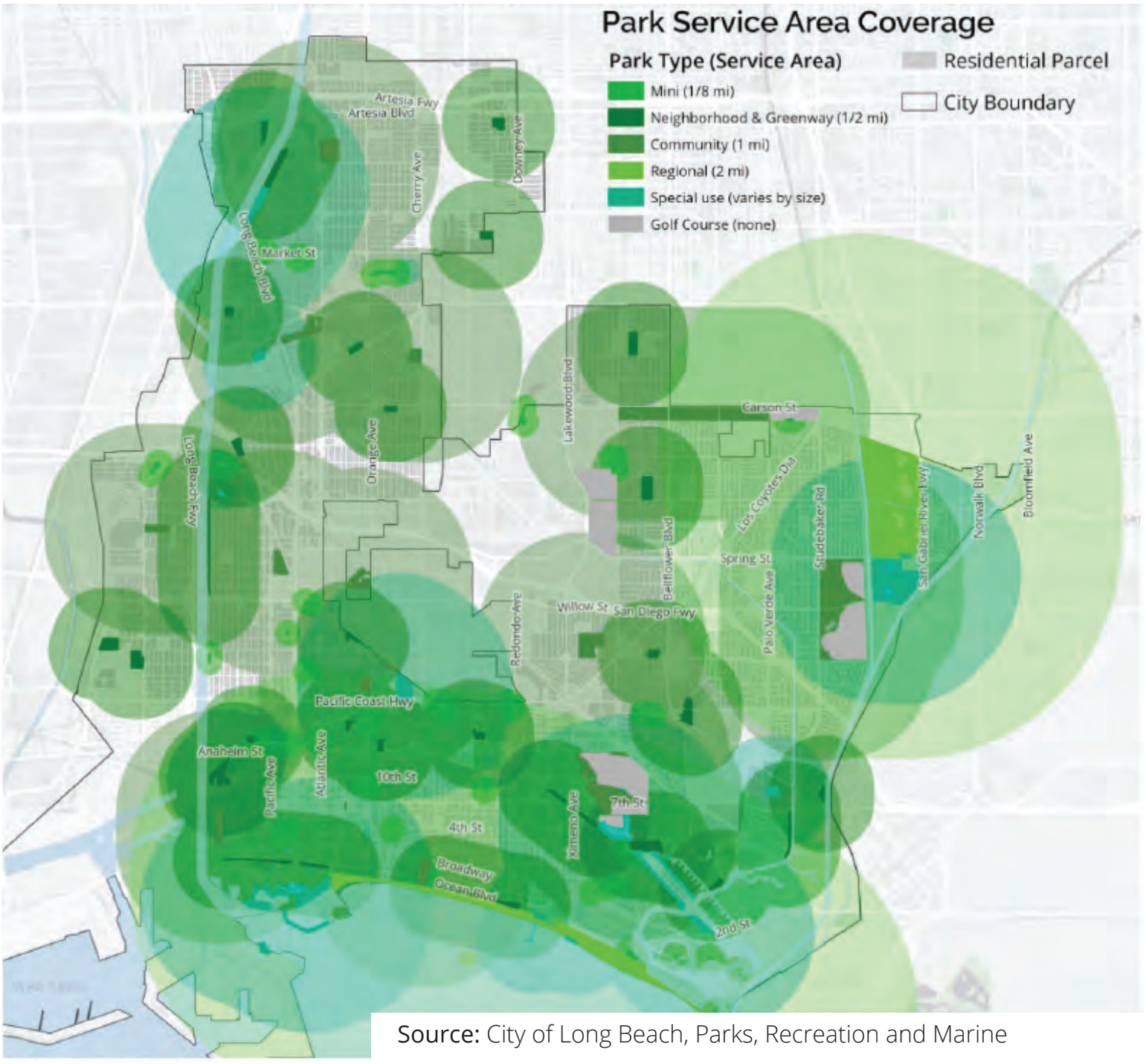
Accomplishments

255 Habitat Stewards have been trained since 2003.

Goal: Create 8 acres of open space per 1,000 residents by 2020

Accomplishments

The current ratio of open space is 6.64 acres/1,000 residents, increased from 5.66 acres/1,000 residents in 2001.



Source: City of Long Beach, Parks, Recreation and Marine

Additional accomplishments

- The Urban Agriculture Incentive Zone program launched in 2018. Currently there are 2 vacant lots under contract for urban agriculture.

- Willow Springs restoration opened 12.5 acres of coastal sage scrub and riparian habitat open space in 2017.

    - Approximately 200 native and riparian tree species and 6,440 native drought-tolerant plants were planted.

    - 11.68 acre feet of water, more than 33.8 million gallons, has been diverted from the Los Angeles River through a water retention basin.

    - The Sustainability Operations Yard was established in 2010 as a base for the mulch program, tree plantings, educational workshops and green job training programs.

    - Monthly Edible Garden and Native Plant workshops were held at Willow Springs Park and went virtual in 2020.

    - Monthly volunteer engagement events were hosted at Willow Springs until paused by COVID-19.

WASTE REDUCTION

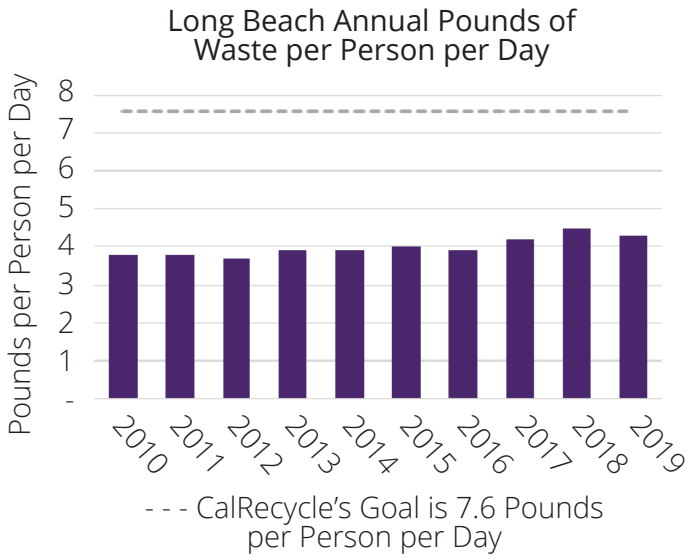
Waste reduction is an important issue to tackle to reduce pollution from plastics and other materials entering our waterways and ocean and to reduce GHG and other emissions from landfills. The City took an important step in 2019 by banning expanded polystyrene in food service, and expanded this ban to retail in 2020. Expanded polystyrene breaks down into tiny pieces that are impossible to clean up once in the environment, with this ban these products are replaced with recyclable or compostable alternatives.

The Environmental Services Bureau (ESB), part of the Department of Public Works, has led the City's efforts to reduce waste in our community. Long Beach has seen a slow increase in waste per person per day over the last 10 years, but is still well below CalRecycle's goal of 7.6 pounds per person per day, as well as the statewide average in 2017 of 5.2 pounds per person per day (CalRecycle). ESB reports some impressive accomplishments increasing educational resources for Long Beach residents in recent years. Workshops have expanded to more topics and are being offered regularly in Spanish and on virtual platforms. ESB has also partnered with the Water Department and Energy Resources Department to create a K-8 school assembly performance program to teach Long Beach students about resource conservation which has reached over 18,000 students. Additionally, the City released new recycling guidelines in 2020 to reduce the amount of contamination in the City's curbside recycling program and educate residents about how to prepare their items for recycling.

Goal: Annual reduction in average pounds of solid waste generated per person per day

Accomplishments

City of Long Beach residents generated **4.3 pounds** of waste per person per day in 2019. This number has increased since 2010, but is still below the state mandated maximum of 7.6 pounds of waste per person per day.



Source: CalRecycle Jurisdiction Diversion/Disposal Rate Summary

Additional accomplishments

- ESB, in partnership with Energy Resources and the Water Department, developed and implemented K-8 school assembly program focused on resource conservation in 2019. This partnership reached 18,070 students and 686 teachers at 47 schools through 199 performances.

- Compost workshops held since 2015 have taught over 1,350 residents to recycle food waste at home. Beginning in 2018, compost workshops were also offered in Spanish.

- Workshops expanded in 2020 to include Waste Reduction, DIY Green Cleaning, and Recycling 101. All workshops are presented in English and Spanish.

- In 2013, LA County opened it's second permanent Household Hazardous Waste (HHW) and Electronic Waste (E-Waste) Collection facility located at EDCO Recycling and Transfer Collection Center in Signal Hill. The center is a collaborative effort between the County, the cities of Long Beach and Signal Hill, EDCO, CalRecycle, and the Sanitation Districts of Los Angeles County. In 2017 the program expanded to include two monthly collection days. The program has collection 5,567,056 pounds of HHW and E-Waste from residents across LA County.

WATER

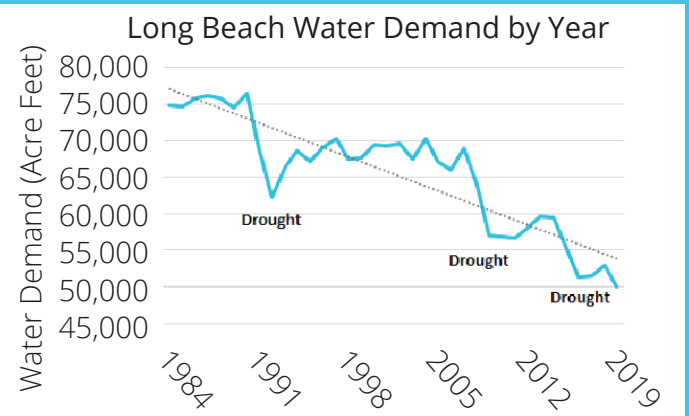
Water conservation is an essential part of urban water management to ensure Long Beach residents always have reliable and safe water service. The Long Beach Water Department has implemented many conservation programs to improve Long Beach's water efficiency so we don't waste this essential resource. Rebates are always available to homeowners, but the Water Department also launched a Direct Install program for multifamily buildings (DIME) to make water efficiency available to residents in these buildings. The Certified Blue Restaurants Program also reaches out to the Long Beach business community to educate businesses and provide resources like free aerators and rebates. Businesses that meet water efficiency standards are then recognized by the Water Department for their efforts to conserve water.

Stormwater management can also improve the sustainability of Long Beach by reducing pollution from runoff, reducing urban flooding, and capturing stormwater for irrigation. The City adopted a Low Impact Development Policy in 2010 that requires all new development to adopt best stormwater management practices to maximize water infiltration and diversion on site. The Office of Sustainability has also worked to analyze Long Beach's watersheds and plant more trees strategically to increase the health of the urban forest and use natural systems to help manage stormwater.

Goal: Reduce per capita use of potable water, exceeding the State mandate to achieve a demand reduction of 20% in per capita water use by the year 2020

Accomplishments

Gallons per capita per day (GPCD) of water used in Long Beach decreased from 134 in the 10-year baseline period (1996-2005) down to 93 in 2020. Long Beach achieved a 30% reduction and has surpassed the state mandated target of a 20% reduction.



Source: Long Beach Water Department

Additional accomplishments

- **70** restaurants have been certified through the Certified Blue Restaurants Program, with **100** pre-rinse spray valves installed, **261** kitchen aerators installed, and **140** bathroom aerators installed.
- A Low Impact Development Policy was adopted in 2010 to require rainwater capture or infiltration designs in new development and major building additions.
- The DIME Program completed **750** retrofits in multifamily dwelling units in disadvantaged communities across the city. The program replaced **880** toilets, **752** showerheads, **1,260** faucet aerators, and **70** communal clothes washers.
- The Office of Sustainability hosted **5** Rain Barrel events with Rain Barrels International during which **389** rain barrels were purchased by Long Beach residents.

LONG BEACH SUSTAINABILITY

Long Beach Sustainability's Mission is to provide policies and programs that

Advance environmental stewardship,
Support local sustainability practices, &
Create a more livable and resilient Long Beach.

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